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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/803,071	03/16/2004	James R. Erickson	W0026	5177

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EXAMINER

MCCLENDON, SANZA L

ART UNIT	PAPER NUMBER
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1711

DATE MAILED: 12/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/803,071

Applicant(s)

ERICKSON, JAMES R.

Examiner

Sanza L. McClendon

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 13-20 is/are rejected.
- 7) ☒ Claim(s) 8-12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3/16/04.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

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DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-7 and 13-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Erickson et al (6,541,553) in view of Erickson (5,389,071).

Erickson et al ('553) teaches curable high performance pressure sensitive adhesives. A said adhesive composition comprises a crosslinkable epoxidized diene polymer, (b) a diene mono-ol polymer, (c) a block copolymer of a vinyl aromatic hydrocarbon and a diene, (d) a tackifier resin and (e) a photoinitiator. The epoxidized diene polymer is an epoxidized monohydroxylated block copolymer of at least two conjugated dienes, preferably isoprene and butadiene, wherein the isoprene block contains the epoxidation and the butadiene block is hydrogenated and the hydroxyl is attached to the end of the butadiene block—see column 2, lines 30-42. Said isoprene block has a mol weight from 100 to 6,000 and the butadiene block has a mol weight from 1000 to 15,000—see column 5. It is deemed that column 5 also includes the limitations found in claimed 6-7. The preferred mono-ol, block copolymer and tackifying resins are hydrogenated. Said epoxidized diene polymer can have an epoxidation amount from 0.1 to about 7 meq/g, preferably from 0.5 to about 5 meq/g, most preferably from 0.1 to 3 meq/g—see column 6. These can be used in amounts from 10 to 90-wt% in the composition. The mono-ol polymer (b) should have a hydroxyl (OH) functionality of 0.6 to 1.4, wherein the preferred is taught to be a hydrogenated polydiene polymer with a terminal hydroxyl, such as polybutadiene or polyisoprene. Said mono-

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ols can be found used in amounts from 0 to 70-wt%. The photoinitiators can be found in column 8, lines 31-61, wherein iodonium salts, such as bis (dodecylphenyl)- iodonium hexafluoroantimonate is disclosed and taught to be very effective. The photoinitiators can be used in amounts from 0.01 to 3-wt%. The tackifiers can be found in column 9, wherein hydrocarbon resins and those having a ring and ball softening point between 20 and 150°C are disclosed. These can be used in amounts from 40 to about 60-wt% in the composition. Erickson et al ('588) does not expressly teach adding a star-block copolymer as defined in the instantly claimed composition. However, these types of polymers are known, especially in pressure sensitive adhesives comprising epoxidized polyconjugated polymers, see Erickson ('071).

Erickson ('071) teaches adhesive compositions comprising epoxidized diolefin block polymers and tackifying resins. Said epoxidized diolefin block copolymers can be partially hydrogenated--see column 4--and comprise at least one mono-alkenyl arene block and at least one epoxidized conjugated diene block--see column 7. Erickson teaches a polymer 4 (column 14), polymer 6 and polymer 11 (column 22) which are star block polymers. These are disclosed as giving a pressure sensitive adhesive considerable cohesive strength, good high service temperature properties and good solvent resistance. Erickson et al ('553) and Erickson ('071) are analogous art because they are from the same field of endeavor that is the art of epoxidized polyconjugated polymer containing pressure sensitive adhesives. Therefore the examiner deems that it would have been obvious for an artisan of ordinary skill in the art to use at least small amounts of a star block polymer of at least one mono vinyl arene and a conjugated diene that is selectively hydrogenated, as taught by Erickson ('071) in a pressure sensitive adhesive as disclosed by Erickson et al ('553). The motivation would have been a reasonable expectation of obtaining a pressure sensitive adhesive having good cohesive strength, as well as, high service temperatures and solvent resistance in the absence of evidence to the contrary and/or unexpected results.

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Allowable Subject Matter

3. Claims 8-12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

4. The following is a statement of reasons for the indication of allowable subject matter: the prior art does not expressly teach these polymers as instantly described in the above listed claims in a pressure sensitive adhesive as found in instant claim 1.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sanza L. McClendon whose telephone number is (571) 272-1074. The examiner can normally be reached on Monday through Friday 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571) 272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Sanza L. McClendon

Examiner

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